S/124/60/000/006/024/039
A005/A001

The Calculation of Cylindric Tanks of Oval Cross Section

derivatives. This equation is converted to an ordinary differential equation, when representing the function sought for in the form of the product of a sine, depending on the coordinate reckoned along the generatrix, by a function depending on an other variable reckoned along the shell guide. The variable radius of curvature of the cross section and the curvature, which appear in the latter equation, are expanded into Fourier series, in which five terms are retained; the unknown function proper is sought for in the form of expansion into a series in powers of a small parameter, with restriction to two expansion terms. A calculation scheme is developed for the shells under consideration, which is illustrated by a numerical example. The results of the calculation are substantiated satisfactorily by the experimental data.

B.T. Sirgey

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

S/124/60/000/006/024/039
A005/A001

Translation from: Referativnyy zhurnal, Mekhanika, 1960, No. 6, pp. 140-141.
7766

AUTHOR: Malkina, R.L.

TITLE: The Calculation of Cylindric Tanks of Oval Cross Section

PERIODICAL: Tr. Ural'sk. politekhn. in-ta, 1959, No. 71, pp. 95-104

TEXT: An approximate solution of the problem is explained for calculating a closed cylindric shell, the cross section of which consists of two pairs of conjugate circles, and which is free supported at its ends by diaphragms absolutely rigid in their plane. The uniformly distributed internal pressure is assumed to be loading the shell. The derivation of the calculation formulae for determining the stresses and the radial displacements are based on the results of V.V. Novozhilov (Teoriya tonkikh obolochek, Leningrad, Sudpromgiz, 1951, and the author's results (Inzhenernyy sb., 1954, Vol. 19, pp. 141-148 - RZhMekh, 1955, No. 8, # 4470). The internal stresses and moments are expressed through a complex function which obeys a certain differential equation in partial

Card 1/2

SOV/147-58-3-7/18

Some Problems in the Dynamics of Circular Plates and Curved Spherical Shells

certain integrals. Finally it is shown that certain problems in the dynamics of curved spherical shells can be reduced to the corresponding problems in the dynamics of circular plates. In particular this is shown for the case of symmetrical forced oscillations. There are 9 Soviet references.

ASSOCIATION: Ural'skiy Politekhnicheskiy Institut, Kafedra Stroitel'noy Mekhaniki (Polytechnical Institute of the Urals, Chair of Structural Mechanics)

SUBMITTED: 15th January 1958.

Card 2/2

SOV/147-58-3-7/18

AUTHOR: Malkina, R.L.

TITLE: Some Problems in the Dynamics of Circular Plates and Curved Spherical Shells (Nekotoryye zadachi dinamiki kruglykh plastin i pologikh sfericheskikh obolochek)

PERIODICAL: Izvestiya Vysshikh Uchebnykh Zavedeniy, Aviatsionnaya Tekhnika, 1958, Nr 3, pp 50-59 (USSR)

ABSTRACT: The problem of forced oscillations for circular plates and curved spherical shells of finite dimensions under arbitrary boundary conditions is considered. In particular the case of suddenly applied forces is discussed. The bending of finite plates under suddenly applied forces and under an impulse has been considered earlier (Ref.1-4). Approximate solutions for problems in the dynamics of plates of infinite dimensions in which these plates are regarded as systems with one degree of freedom have been studied by Rabinovich and Vlasov (Ref.5 and 6). Problems on the dynamics of plates lying on an elastic support have been investigated by Filippov (Ref.7). If the eigen-functions of the differential equation governing the forced oscillations are known the problem is reduced to that of evaluating

Card1/2

Engineering Symposium (Cont.) SOV/4531

TABLE OF CONTENTS:

Card 2/6

MALKIN, K. L.

PHASE I BOOK EXPLOITATION SOV/4531

Akademiya nauk SSSR. Institut mekhaniki

Inzhenernyy sbornik, tom 26 (Engineering Symposium, Vol. 26) Moscow, 1958. 286 p. 2,400 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Otdeleniye tekhnicheskikh nauk. Institut mekhaniki.

Resp. Ed.: A. A. Il'yushin; Ed.: G. I. Pshenichnov; Tech. Ed.: B. M. Lerman.

PURPOSE: This book is intended for engineers.

COVERAGE: The book contains 29 articles dealing with professional work performed by mechanical engineers, such as the calculations of shells, rods, and plates, and solutions of problems in stress distribution and equilibrium. Oscillations (including flutter) and deformation of shells, equilibrium of shell panels, rods and solids, stability of rods, plates, frames and other members, stress concentration, and bending are discussed. Oscillations of aircraft wings are studied. References accompany each article.

Card 1/6

MALKINA, R.L., dotsent, kandidat tekhnicheskikh nauk.

Bending and torsion calculation of a cylindrical envelope of arbitrary open profile. Trudy Ural.politekh.inst. no.54:137-150 '55. (MLRA 9:5)

(Elastic plates and shells)

Malkina, R.L.

1

6

1-MF1

9110. Malkina, R. L., Calculations of girder and frame systems with thin-walled structural members by the method of successive approximations (in Russian), *Trudi Ural'skogo politekhn. in-ta* 56, 82-102, 1955; *Ref. Zh. Mekh.* no. 12, 1956, Rev. 8593.

The theory for calculation of thin-walled bars as developed by V. Z. Vlasov ["Thin-walled elastic bars," Stroiizdat., 1940] and A. A. Umanski ["Torsion and deflection of thin-walled members in aircraft structures," Oborongiz., 1939] is expanded to meet the cases of girder and frame systems. The method recommended by successive approximations is based on the idea in the method of distribution of the moments of entrapping. Examples are given of calculations of multispan girders and frames made up from thin-walled sections.

B. I. Silkin

Courtesy Referativnyi Zhurnal, USSR

Translation, courtesy Ministry of Supply, England

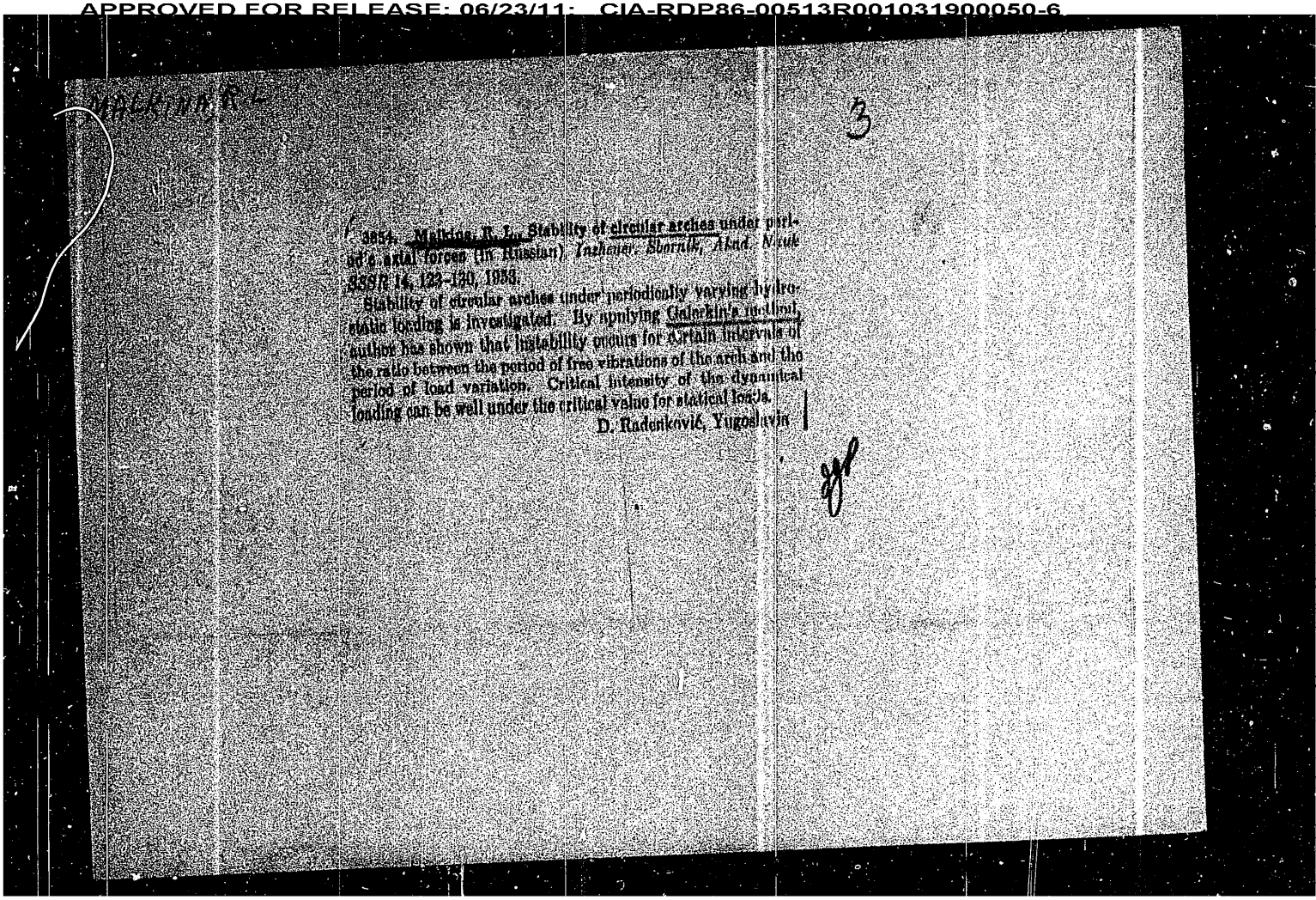
1/1

Silkin

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031900050-6

MALKINA, R.L. (Sverdlovsk)

Calculation of pipes with arbitrary cross section. Inzh.sbor. no.19: 141-148 '54. (MLRA 7:10)
(Pipe) (Elastic plates and shells)



MALKIN, I. G.

3

3854. Malkin, I. G. On Stability of circular arches under periodic axial forces (in Russian). *Inzhenur. Sbornik, Akad. Nauk SSSR* 14, 123–130, 1953.

Stability of circular arches under periodically varying hydrostatic loading is investigated. By applying Cinlerkin's method, author has shown that instability occurs for certain intervals of the ratio between the period of free vibrations of the arch and the period of load variation. Critical intensity of the dynamical loading can be well under the critical value for statical loads.

D. Radenković, Yugoslavia

gpl

Malkina, R. L. On the theory of thin-walled curvilinear bars. Akad. Nauk SSSR. Inženernyi Sbornik 9, 201–208 (1951). (Russian)

The theory of thin-walled curvilinear bars given by V. Z. Vlasov [in a chapter added to the Russian edition of S. P. Timoshenko, The Stability of Elastic Systems, Gostehizdat, 1946] is an extension of Vlasov's theory of straight bars [Thin-walled Elastic Bars, Gosstroiizdat, 1940]. Vlasov assumed that the equilibrium equations (the six Kirchhoff equations) and the relations between the generalized forces and the displacements for straight bars are also valid for curvilinear bars with some small corrective terms. He did not justify his assumption. G. Yu. Džanelidze [Akad. Nauk SSSR. Prikl. Mat. Meh. 8, 25–32 (1944); these Rev. 6, 252] also extended the theory of straight bars to curvilinear bars. His method differs somewhat from that of Vlasov. The author of this paper in developing the theory of curvilinear bars follows Džanelidze rather than Vlasov. She finds also the conditions for which the Kirchhoff equilibrium equations are applicable to thin-walled bars. The author's results agree with those of Džanelidze, and differ a little from those of Vlasov.

T. Leser (Lexington, Ky.).

Source: Mathematical Reviews, Vol 13 No. 9

L 04777-67

ACC NR: AP6025725

2

Zr comprises the electrochemical formation of an oxide on the metal surface with subsequent solution of the oxide. At potentials above 0.17 v the rate of solution and anodic current increase rapidly resulting in embrittlement and eventual disintegration of Zr electrodes produced by induction melting. Action on arc melted Zr containing 0.02% C is ten times slower. Tests under potentiostatic conditions were found to be more severe than the corrosion tests run at 100°C. The rate of solution of Zr in concentrated HCl is 2 orders higher than in dilute acid. Orig. art. has: 2 figures.

SUB CODE: 07, 13/ SUBM DATE: 03Apr66/ ORIG REF: 003/ OTH REF: 004

Card 2/2 pla

L 04777-67 EWT(m)/EWP)/EWP(t)/ETI/EWP(k) IJP(c) JD/WW/JG/WB

ACC NR: AP6025725 SOURCE CODE: UR/0365/66/002/004/0490/0492

AUTHOR: Gil'man, V. A.; Kolotyrkin, Ya. M.; Malkina, R. I.

ORG: Scientific Research Physicochemical Institute im. L. Ya. Karpov (Nauchno-issledovatel'skiy fiziko-khimicheskiy institut)

TITLE: Solution of zirconium in concentrated hydrochloric acid

SOURCE: Zashchita metallov, v. 2, no. 4, 1966, 490-492

TOPIC TAGS: zirconium, corrosion, corrosion rate, electrochemistry, solution kinetics, chloride, induction melting, metal melting

ABSTRACT: Studies of the corrosion and electrochemical behavior of zirconium under anodic polarization conditions were continued using concentrated HCl, 11.5 N. In the passive region, at potentials more negative than +0.17 v, the rate of Zr solution to Zr^{+4} is independent of potential and amounts to $0.2\text{-}1 \cdot 10^{-4}$ amp/cm^2. The rate of solution of Zr pre-etched in HF corresponds to the stationary anodic current density at the given potential. In the case of Zr with atmospheric oxide films, the initial average rate of solution is an order higher than the anodic current through the system, but becomes somewhat lower and almost constant with time. The proposed mechanism for the solution of passive

UDC: 620.193.41:669.296

Card 1/2

MALKINA, R. I.

See Also: RAYEV, Z. A., DRAZHNER, G. N., and DAZILEVICH, K. K.

Authors: Z.A. Rayev, G. N. Draznner, R. I. Malkina and K. K. Dazilevich -- "Use of millet flour for sugaring meshes in alcohol production," Pishch. prom-st' SSSR, Issue 12, 1949, p. 13-19

SO: U-3566, 15 March 53, (Letopis 'Zhurnal 'nykh Statey, No. 14, 1949).

The influence of ....

air containing CO_2. The corrosion rates were substantially the same for wet ozonized air in the presence or absence of CO_2. This indicates that moisture does not promote the formation of carbonates. There are 2 figures and 1 table.

ASSOCIATION: Kafedra obshchey i organicheskoy khimii, Moskovskiy institut khimicheskogo mashinostroyeniya (Department of General and Organic Chemistry, Moscow Institute of Chemical Machinery)

SUBMITTED: October 2, 1961

Card 2/2

S/153/62/005/006/013/015
E075/E336

AUTHOR: Malkina, R.G.

TITLE: The influence of nitrogen and carbon dioxide on the corrosion of copper by ozonized air

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Khimiya i khimicheskaya tekhnologiya, v. 5, no. 6, 1962, 995 - 998

TEXT: The author studied the effect of the air constituents N_2 and CO_2 on the corrosion of 99.90% pure Cu. The corrosion of Cu with ozonized oxygen proceeds with greater intensity in the first 2-3 hours than corrosion with ozonized air. Subsequently, however, the air gives more corrosion than the ozonized O_2, indicating a possible effect of N_2 on the corrosion caused by air. On the other hand, ozonized O_2 forms a protective film which prevents, to a large degree, further corrosion. The corrosion products did not have any N-containing compounds. This means that N_2 does not take a direct part in the corrosion process. A similar finding was obtained for the corrosion caused by ozonized

Card 1/2

MALKINA, R.G.

Copper corrosion in ozonized air. Trudy MIKHM 22:51-62 '60.
(MIRA 14:1)

(Copper--Corrosion) (Ozone)

S/103/61/022/002/011/015
B019/B060

Use of magnetic amplifiers ...

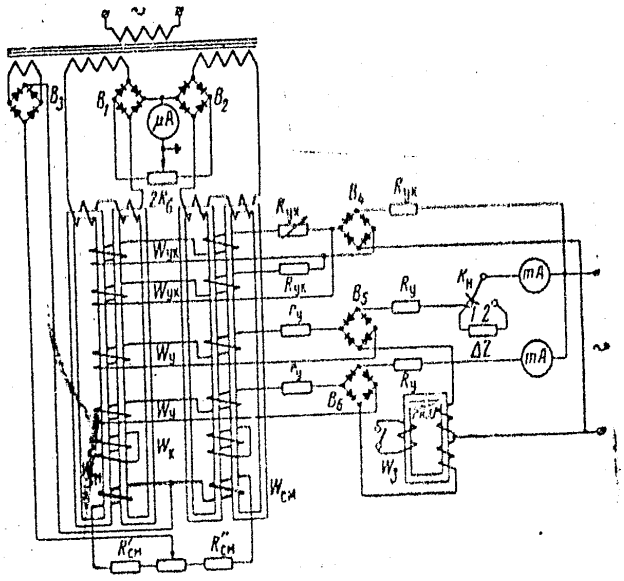


Рис. 7.

Card 6/6

S/103/61/022/002/011/015
B019/B060

Use of magnetic amplifiers ...

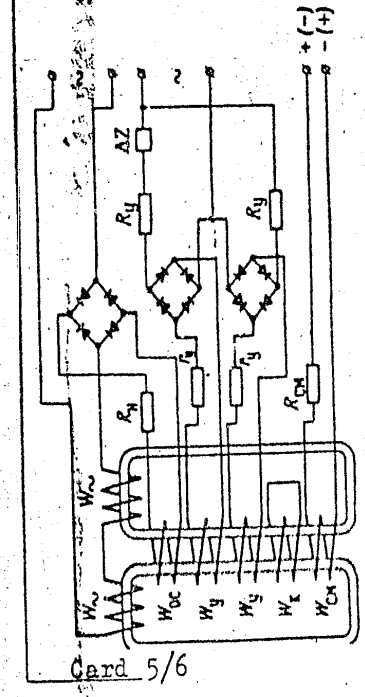


Рис. 5

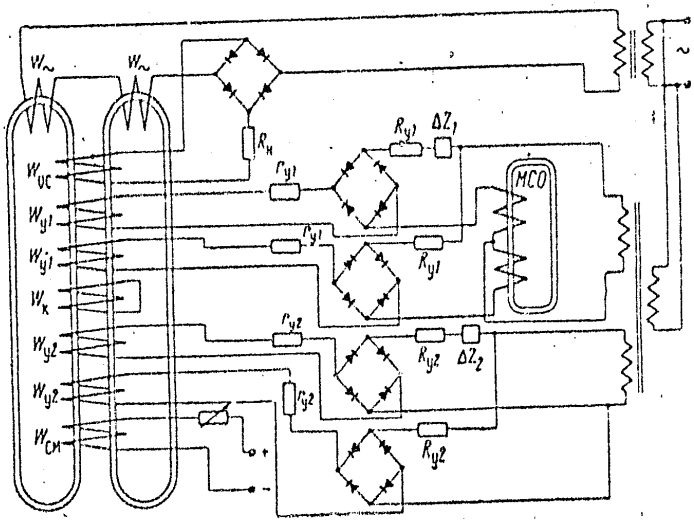


Рис. 6

Card 5/6

89180

S/103/61/022/002/011/015
B019/B060

Use of magnetic amplifiers ...

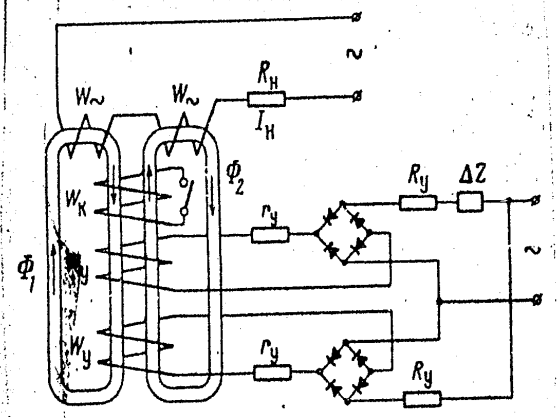


Рис. 3

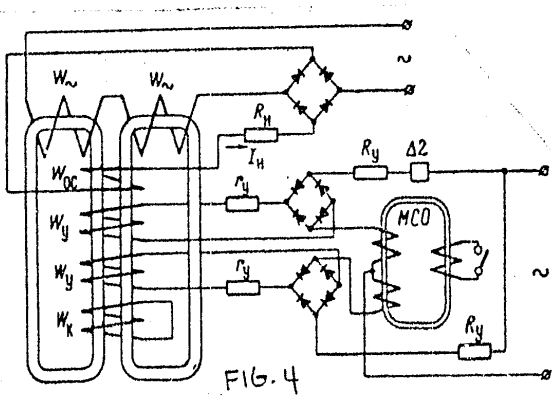


FIG. 4

Card 4/6

Use of magnetic amplifiers ...

difference between amperages in circuits with and without short-circuited coil may be used for the measurement. Five variants of such measuring setups are discussed more closely. Fig. 3 shows a single-cycle magnetic amplifier for the measurement of a complex resistance. This circuit features a feedback coil which ensures a larger amplification factor and permits distinguishing the polarity of the amplified current differences. Figs. 5 and 6 shows the diagrams of two contactless relays, and Fig. 7 shows the differential diagram of a push-pull magnetic amplifier used for measuring a complex resistance. There are 7 figures and 4 Soviet-bloc references.

SUBMITTED: August 1, 1960

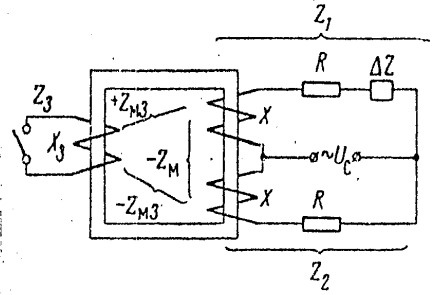


Рис. 2

Card 3/6

Use of magnetic amplifiers ...

measurements can be made with magnet-coupled circuits with the aid of a magnetic amplifier. Shock-proof and vibration-proof measuring instruments can thus be developed, which are also suited for measuring small resistances at high frequencies. The difference between rectified currents of two circuits is used in the study of the variants dealt with here. In one circuit there is the active resistance R, and in the other the impedance ΔZ is present in addition to the active resistance R. Fig. 2 shows such a measuring circuit. For $\Delta Z = 0$ the following relation holds:

$$\mathring{I}_1 = \mathring{I}_2 = \mathring{U}/R \qquad (2)$$

Connecting a small resistance to be measured leads to a change of these currents, and the way of calculating such a change is shown. Provided that ΔR and ΔX be considerably smaller than R, the relation

$$\Delta I = |\mathring{I}_1| (\Delta R R + \Delta X 2X)/(R^2 + 4X^2) \qquad (6)$$

is obtained for the difference between the two currents. Likewise, the

89180

S/103/61/022/002/011/015
B019/B060

9.2530

AUTHOR: Malkina, O. G. (Moscow)

TITLE: Use of magnetic amplifiers for measuring impedances with magnet-coupled circuits

PERIODICAL: Avtomatika i telemekhanika. v. 22, no. 2, 1961, 243-249

TEXT: Magnet-coupled circuits permit the measurement of every component (R and X) of an impedance. This simplifies laboratory measurements and facilitates the construction of automatic control instruments for industrial processes. The design of pick-ups for control or automatic regulation presupposes that the signal be unequivocally dependent upon each of the two components. The latter are separated either with the aid of a bridge circuit with two phase-sensitive indicators or with the aid of a circuit, in which the voltage to be controlled is obtained through the use of balancing indicators. An additional phase shifter is then connected to the bridge, and the indicators are fed by two voltages taken off at different points of the bridge and of the phase shifter. The indicators used are either differential-amplitude- or differential-phase indicators. The same

Card 1/6

MALKINA, O.G. (Moskva)

Rectified voltage regulators. Avtom.i telem. 21 no.4: 542-547 Ap '60. (MIRA 13:6)
(Voltage regulators)

Impedance Measurements at Audio Frequencies by the Method of Magnetically Connected Circuits

magnetic amplifiers may be used whose control windings function as induction-coupled circuits. Magnetic amplifiers are employed efficiently with differential circuits as shown in fig.3, whereby the distortion of alternating currents in the control circuits by pair harmonics and voltage-change errors are eliminated. There are 3 circuit diagrams and 1 graph.

SOV/115-59-6-16/33

9(2), 28(2)

AUTHOR: Malkina, O.G.

TITLE: Impedance Measurements at Audio Frequencies by the Method of Magnetically Connected Circuits

PERIODICAL: Izmeritel'naya tekhnika, 1959, Nr 6, pp 39-42 (USSR)

ABSTRACT: The author explains a method of measuring separately by components R and X of the impedance Z. Such measurements are required for a number of production processes, for example, for the quality control of cable and capacitor paper, inductances for radio equipment, etc. The existing methods of measuring the impedance components are complicated and delay control and automation of production processes where such measurements are necessary. For obtaining separate measurements of R and X, circuits with different relative sensitivity to resistance and impedance changes are required which may be provided by induction-coupled circuits. Fig.1 shows circuits with induction-coupling of coils and with negative induction-coupling between them. The author presents sets of equations for the currents in these circuits. When measuring impedances by the method of induction-coupled circuits,

Card 1/2

MALKINA, N.I.; KAZARNOVSKIY, S.N.

Synthesis of cyanuric acid from urea. Zhur.prikl.khim. 37 no. 5:1158-1160 My '64. (MIRA 17:7)

1. Gor'kovskiy politekhnicheskiy institut imeni A.A.Zhdanova.

22438

The synthesis of cyanuric ... S/080/61/034/007/015/016
D223/D305

Am. pat. 2676151; Ch. A., 48, 13210, 1954; D.A.W. Adams, R.H. Wilson, Am. pat. 2667458; Ch. A., 48, 5515, 1954; C.H. Hands, F. Whitt, J. Soc. Chem. Ind., 67, 66, 1948.

ASSOCIATION: Gor'kovskiy politekhnicheskiy institut imeni A.A. Zhdanova (Gor'kiy Polytechnic Institute imeni A.A. Zhdanov)

SUBMITTED: September 13, 1960

Card 3/3

The synthesis of cyanuric ...

cyanuric acid. The optimum concentration of sulphuric acid was 24%, while, below this concentration, the oxyamino product of triazine appeared in the melt, decreasing the purity of cyanuric acid. This is a result of insufficiency of H_2SO_4 to change ammelines and ammelides into cyanuric acid. The experiments show that the optimum quantity of 24 % H_2SO_4 is 4 gr. for 4.5 gr. of urea nitrate, while experiments 14-17 give the best time as 5 hours. The additional time, decreases the product to 48 % and increases the amount of ammelides and ammelines. The optimum temperature is 200°C while higher temperature increases the quantities of impurities. The melt, obtained under optimum conditions, contained 60-65 % of cyanuric acid (wt. % of melt): the rest being amm. sulphate undecomposed at the temperature of experiments. To separate the cyanuric acid from side products 1 gr. of melt was dissolved in 50 mls. of water at room temperature and filtered. The residue contained cyanuric acid of 97-99 % purity. There are 1 table and 19 references: 7 Soviet-bloc and 12 non-Soviet-bloc. The references to the English-language publications read as follows: G.A. Loughran, E.O. Hook,

Card 2/3

22438

S/080/61/034/007/015/016
D223/D305

53610

AUTHOR: Malkina, N.I.

TITLE: The synthesis of cyanuric acid from urea nitrate (Report II)

PERIODICAL: Zhurnal prikladnoy khimii, v. 34, no. 7, 1961, 1630 - 1632

TEXT: The present work deals with the investigation of the method of producing cyanuric acid without ammelide and ammeline impurities by the direct treatment of urea nitrate with sulphuric acid, aiming to reduce the time of synthesis and the study of the effects of various factors (H_2SO_4 concentration, quantity used, heating time experimental temperature) on the yield and purity of obtained product. The resulting solution was neutralized with a 25 % ammonia solution using methylred as an indicator and analyzed for cyanuric acid content. The results showed that the concentration of sulphuric acid to a great extent affects the yield and purity of

Card 1/3

The synthesis of cyanuric ...

1 table and 27 references: 8 Soviet-bloc and 19 non-Soviet-bloc. The 4 most recent references to the English-language publications read as follows: H. Iida, J. Chem.Soc., Japan, Ind. Chem. Sect., 54, 775, 1951; Ch. A., 47, 1953; H. Iida, K. Vamakawa, J. Chem. Soc. Japan, Ind. Chem. Sect., 57, 587, 1954; Ch. A., 49, 6609, 1955; Z. Voshida, R. Oda, J. Chem. Soc. Japan, Ind. Chem. Sect., 56, 92, 1953; Ch. A. 49, 4679, 1955; H. Kinoshita, Rev. Phys. Chem. Japan, 25, 34, 1955; Ch. A., 50, 7114, 1956.

ASSOCIATION: Gor'kovskiy politekhnicheskiy institut imeni A.A. Zhdanova (Gor'ky Polytechnic Institute imeni A.A. Zhdanov)

SUBMITTED: May 4, 1960

Card 5/5

22436
S/080/61/034/007/011/016
D223/D305

The synthesis of cyanuric ...

The investigation of the kinetics of formation of intermediate products and cyanuric acid obtained when heating urea nitrate at atmospheric pressure and temperature intervals of 132-150°C showed that thermal treatment of urea nitrate is accompanied with its isomerization into ammonium cyanate and decomposition of the latter into cyanuric acid and ammonia (reversible reaction). The optimum conditions for obtaining ammonium cyanate (34 %) are a temperature of 190°C and synthesis time of 60 minutes. Cyanuric acid is produced by the polyrization of cyanic acid. The optimum conditions for the biurette (42 %) formation are temperature 170°C and synthesis time 180 minutes; cyanuric acid (63 % calculated on the carbon content of urea nitrate or 45 % of initial urea nitrate) at a temperature of 250°C and synthesis time 15 minutes. The ammoniation products of cyanuric acid were ammelide and ammeline (side products), their total quantity being 13-14 % of urea nitrate. The yield of cyanuric acid can be increased from a mean of 43 % to 63% by treating obtained melt with a 30 % nitric acid solution which frees the product from ammeline and ammelide. There are 5 figures,

Card 4/5

22436
S/080/61/034/007/011/016
D223/D305

The synthesis of cyanuric ...

Table (cont'd)

Содержание циануровой кислоты и оксиаминопроизводных (аммелина и аммелида) в плаве

① Содержание (% от исходной мочевины)			
② до обработки азотной кислотой		③ после обработки азотной кислотой	
④ циануровой кислоты	⑤ аммелина и аммелида	⑥ циануровой кислоты	⑦ аммелина и аммелида
45.0	14.3	64.0	0
45.7	13.6	63.3	0
46.6	14.0	64.0	0
45.6	14.3	64.1	0
46.0	14.0	64.8	0
44.8	14.0	63.0	0
45.0	14.2	64.6	0
44.2	13.0	60.2	0

Card 3/5

product followed by the spectrophotometric analysis of ammeline and ammelide (Ref. 27: N.I. Malkina, A.I. Finkel'shteyn, ZhFKh 32, 5, 981, 1958). For better clarification of the process, the separate products were expressed as the yield on the initial urea nitrate via carbon mass balance. To study the kinetics of formation, cyanuric acid was produced at temperature intervals of 132-150°C and for corresponding experimental times of 15, 30, 60, 120, 180 minutes. In order to increase the yield of cyanuric acid and also to free it from side products a series of experiments were carried out, the results of which are given in the following table:

Table. Cyanuric acid and oxyamino products (ammeline and ammelide) content in the melt.

Legend: 1 - content (% on initial urea nitrate); 2 - before HNO_3 treatment; 3 - after HNO_3 treatment; 4 - cyanuric acid; 5 - ammeline and ammelide; 6 - cyanuric acid; 7 - ammeline and ammelide.

22436

S/080/61/034/007/011/016
D221/D303

53610

AUTHORS: Falkina, N.I., and Kazarnovskiy, S.N

TITLE: The synthesis of cyanuric acid from urea nitrate (Report 1)

PERIODICAL: Zhurnal prikladnoy khimii, v. 34, no. 7, 1961, 1583 - 1587

TEXT: Data in technical literature do not give the reaction mechanism of the thermal treatment of urea nitrate under atmospheric pressure and the present work deals with these aspects. With an accuracy of 0.01 gr., 3 gr. of urea nitrate in a glass test tube were heated in an oil thermostate to the required temperature and for the required time. After this the test tube was taken out, cooled and the contents weighed. Ammonium cyanate was determined from the portions of the product by potentiometric titration. The principle of the separation method for determining ammeline and ammelide consisted of the alkaline extraction of samples of the

Card 1/5

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031900050-6

Optical Investigation of the Molecular Structure of the Derivatives of Sym-Triazine. II. The Absorption Spectra in the Ultraviolet Range, the Molecular Structure and the Analysis of Ammeline and Ammelide 76-32-5-2/47

Polytechnical Institute imeni A. A. Zhdanov, Dzerzhinskiy
Department of the Institute of Nitrogen Industry)

SUBMITTED: November 19, 1956

1. Triazines---Molecular structure 2. Triazines---Spectrographic analysis 3. Spectrophotometer---Applications

Card 3/3

Optical Investigation of the Molecular Structure of the Derivatives of Sym-Triazine. II. The Absorption Spectra in the Ultraviolet Range, the Molecular Structure and the Analysis of Ammeline and Ammelide

76-32-5-2/47

phenomena, so that a separation analysis can be carried out on this basis. The change of the absorption spectra by the acidity is explained by the tautomeric conversions, taking place due to an increase or reduction of the number of interbindings. A quantitative determination of these substances was described by A. A. Korinfskiy (Ref 11), as well as by S. N. Kazarnovskiy and N. I. Makina (Ref 10). The course of analysis is described from which follows that calibration curves are plotted with the help of the pure substances and that the calculation of the concentration is carried out according to the method of consecutive approximations, with determinations of the optical density being made. The duration of analysis is given to be from 20 - 25 minutes, with tabular comparisons of the results with determinations according to other methods being mentioned. There are 3 figures, 2 tables, and 12 references, 3 of which are Soviet.

ASSOCIATION: Gor'kovskiy politekhnicheskiy institut im. A. A. Zhdanova, Dzerzhinskiy filial Instituta azotnoy promyshlennosti (Gor'kiy

AUTHORS: Malkina, N. I., Finkel'shteyn, A. I. 76-32-5-2/47

TITLE: Optical Investigation of the Molecular Structure of the Derivatives of Sym-Triazine(Opticheskoye issledovaniye molekulyarnogo stroyeniya proizvodnykh sim-triazina) II. The Absorption Spectra in the Ultraviolet Range, the Molecular Structure and the Analysis of Ammeline and Ammelide (II Spektry pogloshcheniya v ul'trafioletovoy oblasti, molekulyarnoye stroyeniye i analiz ammelina i ammelida)

PERIODICAL: Zhurnal fizicheskoy khimii, 1958, Vol. 32, Nr 5, pp. 981-985 (USSR)

ABSTRACT: In the present work investigations of the tautomeric transformations of the above mentioned compounds in acid and alkaline medium using the mentioned spectra for the analysis of mixtures of these compounds are carried out. Data are given with respect to the production of the two substances as well as a graphical representation of the obtained absorption spectra obtained by means of a quartz-photoelectric spectrophotometer of the type СФ-4. It was observed that a noticeable displacement of the absorption maximum as function of the acidity takes place, with both substances displaying opposite

Card 1/3

MALKINA, N.I.

KAZARNOVSKIY, S.N.; MALKINA, N.I.

Mechanism of the reactions taking place during thermal processing of urea under the pressure of generated gas. Zhur.prikl.khim. 31 no.3:452-458 Mr '58. (MIRA 11:4)

1.Gor'kovskiy politekhnicheskiy institut im. A.A. Zhdanova.
(Urea)

MAIKINA, N. I., Cand Tech Sci (diss) -- "A study of the mechanism of reactions occurring in the synthesis of derivatives of triazine from urea". Gor'kiy, 1959. 9 pp (Min Higher Edc USSR, Gor'kiy Polytech Inst im A. A. Zhdanov), 100 copies (KL, No13, 1960, 122)

ILLEGIBLE

FINKEL'SHTEYN, A.I.; MALKINA, N.I.; MACHIN, G.P.

Ultraviolet absorption spectra and molecular structure of triazine derivatives. Fiz. sbor. no.3:385-388 '57. (MIRA 11:8)

1. Dzerzhinskiy filial Gosudarstvennogo nauchno-issledovatel'skogo i proyektnogo instituta azotnoy promyshlennosti, Gor'kovskiy politekhnicheskiy institut im. A.A. Zhdanova i Gor'kovskiy gosudarstvennyy institut im. N.I. Lobachevskogo.
(Triazine--Spectra)

MALKINA, N.I.

PRIKHOT'KO, A.F.

24(7) p 3 PHASE I BOOK EXPLOITATION SOV/1365

L'vov. Universytet

Materialy X Vsesoyuznogo soveshchaniya po spektroskopii. t. 1: Molekulyarnaya spektroskopiya (Papers of the 10th All-Union Conference on Spectroscopy. Vol. 1: Molecular Spectroscopy) [L'vov] Izd-vo L'vovskogo univ-ta, 1957. 499 p. 4,000 copies printed. (Series: Its: Fizychnyy zbirnyk, vyp. 3/8/)

Additional Sponsoring Agency: Akademiya nauk SSSR. Komissiya po spektroskopii. Ed.: Gazer, S.L.; Tech. Ed.: Saranyuk, T.V.; Editorial Board: Landsberg, G.S., Academician (Resp. Ed., Deceased), Neporent, B.S., Doctor of Physical and Mathematical Sciences, Fabelinskiy, I.L., Doctor of Physical and Mathematical Sciences, Fabrikant, V.A., Doctor of Physical and Mathematical Sciences, Kornitskiy, V.G., Candidate of Technical Sciences, Rayskiy, S.M., Candidate of Physical and Mathematical Sciences, Klimovskiy, L.K., Candidate of Physical and Mathematical Sciences, Milyanchuk, V.S., Candidate of Physical and Mathematical Sciences, and Glauberman, A. Ye., Candidate of Physical and Mathematical Sciences.

Card 1/30

Card 24/30

heated to 50 to 60° and precipitated with 50 ml of 0.4 n. solution of $Ba(OH)_2$. This is filteted through a crucible No 4, washed with 5 to 10 ml of 0.1 m. NaOH and the precipitate is discarded. The filtrate is neutralized with 0.5 n. HCl using phenolphthalein and an excess of 0.5 ml of the acid is added. The separated precipitate (I + II) is washed of IV, dried and weighed. 50 ml of a solution of the cyanuric acid (1.5 g in 1 liter water) are added to the filtrate. The precipitated III is dried and weighed. The precipitate of I + II is dissolved in 25 ml of 0.1 NaOH. 50 ml. of the saturated solution of picric acid and 5 ml. of 60% CH_3COOH are added to an aliquote sample (about 20 mg of I or II). 24 hours later the precipitate of II and I picrate are filtered off with a filter No 4, washed 2 or 3 times with water, dissolved on the filter with 10 ml of 2% NaOH; the solution is diluted to 100 ml and photometered with a blue light filter. The

MALKINA, N.F.

G-3

USSR/Analysis of Organic Substances.

Abs Jour : Referat Zhur - Khimiya, No 6, 1957, 19740

Author : S.N. Kazarnovskiy, N.I. Malkina.
Inst : Gorki Polytechnical Institute.
Title : Separate Determination of Ammeline, Ammelide and Cyanurate of Melamine in Industrial Melamine.

Orig Pub : Tr. Gor'kovsk. politekhn. in-ta, 1955, 11, No 3, 56-61.

Abstract : 15 g of industrial melamine are extracted with 50 ml of 0.1 n. NaOH at 50 to 60°. The cooled solution is filtered through Büchner's funnel, the remainder is washed with water several times and discarded. The filtrate is neutralized with 0.5 n. HCl with phenolphthalein and an excess of acid of 0.5 ml is added. The separated precipitate of ammeline (I), ammelide (II) and cyanurate of melamine (III) are filtered off with a glass filter No 4, melamine (IV) is washed out with water, the remainder is washed off into a glass with 40 ml of warm 0.1 n. NaOH,

- 28 -

Card 1/3

MALKINA, M. S.

28615

Ryentgyenotyerapiya Pri Gipertonicheskoy Bolyezni Vrachyeb Dyelo, 1949, No. 9, STB. 793-94

SO: LETOPIS NO. 38

MALKINA, M. I.

USSR.

13229 **Etching of Steels by Ionic Bombardment.** I. N. Prilezhaeva, G. V. Spivak, and M. I. Malkina. *Henry Brutcher Translation No.* 3459, 8 p. (Abridged from *Zhurnal Tekhnicheskoi Fiziki*, v. 24, no. 11, 1954, p. 2090-2098.) Henry Brutcher, Altadena, Calif.

Merits of ionic bombardment for revealing micro-structure as well as grain boundaries through differential coefficients of disintegration. Micrographs. 7 ref.

62

MALKINA, M.G., doktor med.nauk; KALUGINA, L.T., kand.med.nauk

Organizing postgraduate training for therapeutists in Moscow Province. Zdrav.Ros.Feder. 6 no.9:22-25 S '62. (MIRA 15:10)

1. Iz 1-y terapevticheskoy kliniki (zav. - doktor med.nauk M.G. Malkina) Moskovskogo oblastnogo nauchno-issledovatel'skogo klinicheskogo instituta imeni M.F.Wladimirskogo (dir. - zasluzhennyy vrach RSFSR kand.med.nauk P.M.Leonenko).
(MOSCOW PROVINCE--THERAPEUTICS--STUDY AND TEACHING)

MALKINA, M.G., kand.med.nauk

Treatment of the epileptic state. Kaz.med.zhur. 41 no.1:88-89 Ja-F '60. (MIRA 13:6)

1. Iz kafedry psikhiatrii (zav. - prof. M.P. Kutanin) Saratovskogo meditsinskogo instituta.
(EPILEPTICS--CARE AND TREATMENT)

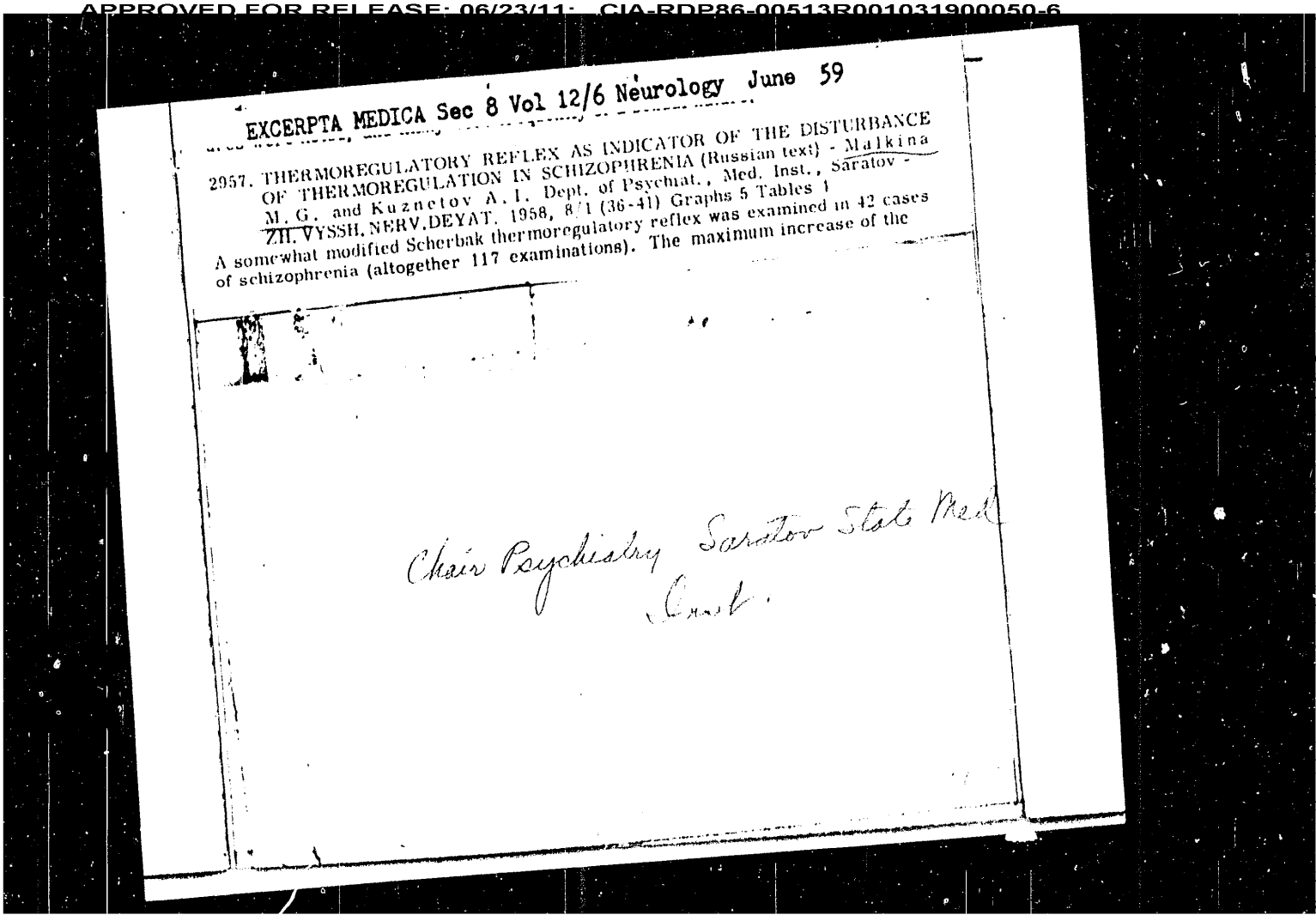
MALKINA, M.G., MARTYNOV, L.A.

Stimulation of pyrogenic effect of sulfozine. Farm. i toks. 21 no.3 47-49 My-Je '58 (MIRA 11:7)

1. Kafedra psikhiatrii (zav. - prof. M.P. Kutanin) i kafedra farmakologii (zav. - dots. B.G. Volynskiy) Saratovskogo gosudarstvennogo meditsinskogo instituta.

(FEVER, experimental,
increase of pyretic eff. of sulfozine with amphetamine (Rus))
(AMPHETAMINE, effects,
increase of pyretic eff. of sulfozine (Rus))

skin temperature in one hand was attained immediately after the 20 min. with bath at 45° C.; the other hand showed a decrease of the temperature to the initial levels within 40 to 60 min. This reflex was observed in 10 out of 42 cases before the treatment; in another 32 cases the reflex was markedly altered. As to the type of reaction, the thermoregulatory reflex was classified as follows: (1) Stasis, characterized by a more or less normal reflex increase of the skin temperature not returning to the initial level during the examination period (14 cases). (2) Areflexia by a slight fluctuation of the temperature (up to ± 0.5° C.) (6 cases). (3) Distortion of the reflex by a progressive decrease of the body temperature, during the period of examination (12 cases). The stasis type of the thermoregulatory reflex was mostly symptomatic for hallucinatory-paranoid, paranoid and hypochondriacal forms of schizophrenia, while the distortion of the reflex was characteristic for simple and paranoid forms. After the treatment (insulin and ECT), nearly constant normalization of the reflex was noted, but this did not necessarily coincide with clinical improvement. The data obtained confirm the predominance of the static nerve processes in the CNS in schizophrenia and reveal some deep perturbations in the thermoregulation. It seems that, in case of schizophrenia, some other pathological disturbances in thermoregulation are possible, particularly non-infectious fever reactions, changes in the temperature of the CSF, etc.



EXCERPTA MEDICA Sec 8 Vol 12/6 Neurology June 59

2957. THERMOREGULATORY REFLEX AS INDICATOR OF THE DISTURBANCE OF THERMOREGULATION IN SCHIZOPHRENIA (Russian text) - Malkina M. G. and Kuznetov A. I. Dept. of Psychiat., Med. Inst., Saratov - ZH. VYSSH. NERV. DEYAT. 1958, 8/1 (36-41) Graphs 5 Tables 1

A somewhat modified Scherbak thermoregulatory reflex was examined in 42 cases of schizophrenia (altogether 117 examinations). The maximum increase of the

Chair Psychiatry Saratov State Med Inst.

MALKINA, M.G.

KUTANIN, M.P., professor; MALKINA, M.G.

Clinical aspects of atypical forms of delirium tremens. Sov.med. 21 no.5:132-134 My '57. (MLRA 10:7)

1. Iz kafedry psikhiatrii Saratovskogo meditsinskogo instituta.
(DELIRIUM TREMENS
clin. aspects of various forms)

T-3

USSR/Human and Animal Physiology. Thermoregulation

Abs Jour : Ref Zhur - Biol., No 14, 1958, No 65063

Author : Malkina M.G.
Inst : - Chair of Psychiatry, Saratov State Med. Inst.
Title : Pathological Thermoregulation in Schizophrenia

Orig Pub : V sb.: Aktual'n. probl. nevropatol. i psikhiatrii, Kuybyshev, 1957, 250-258

Abstract : The development of fever at the height of catatonic excitation was observed in patients with schizophrenia. The body temperature of the patients fluctuated between 37 and 39°; that of the cerebrospinal fluid between 37.5 and 38.2°. Measuring the skin of the forearm after the hand had been in a 45° bath for 60 minutes revealed the pathological nature of the thermoregulatory reflex in the form of congestion, areflexia and distortion. Phenamine given with sulfozine increased the pyrogenic effect of the latter. The prescription of sulfozine in combination with phenamine is recommended.- 0.01 gm for a period of 1-2 days.

Card : 1/1

MALKINA, M. G., Doc Med Sci -- (diss) "Cirrhosis of the liver as an outcome of Botkin's disease." Mos, 1957. 15 pp (Min of Health USSR, Central Inst for Advanced Training of Physicians), 200 copies (KL, 2-58, 115)

MALKINA, M.G., kandidat meditsinskikh nauk (Saratov); ARKHANGEL'SKIY, A.V., kandidat meditsinskikh nauk (Saratov)

Psychic disorders in cerebro-hypophysial cachexia. Probl.endok. i gorm. 2 no.1:3-7 Ja-F '56. (MLRA 9:10)

1. Iz kafedry psikhiatrii (zav. - prof. M.P.Kutanin) i kafedry patologicheskoy anatonii (zav. - prof. A.M.Antonov) Saratovskogo meditsinskogo instituta.

(SIMMONDS' DISEASE, complications,
ment. disord. (Rus))
(MENTAL DISORDERS, etiology and pathogenesis,
Simmonds' dis. (Rus))

EXCERPTA MEDICA Sec. 6 Vol. 11/7 July 57

MALKINA M. G.

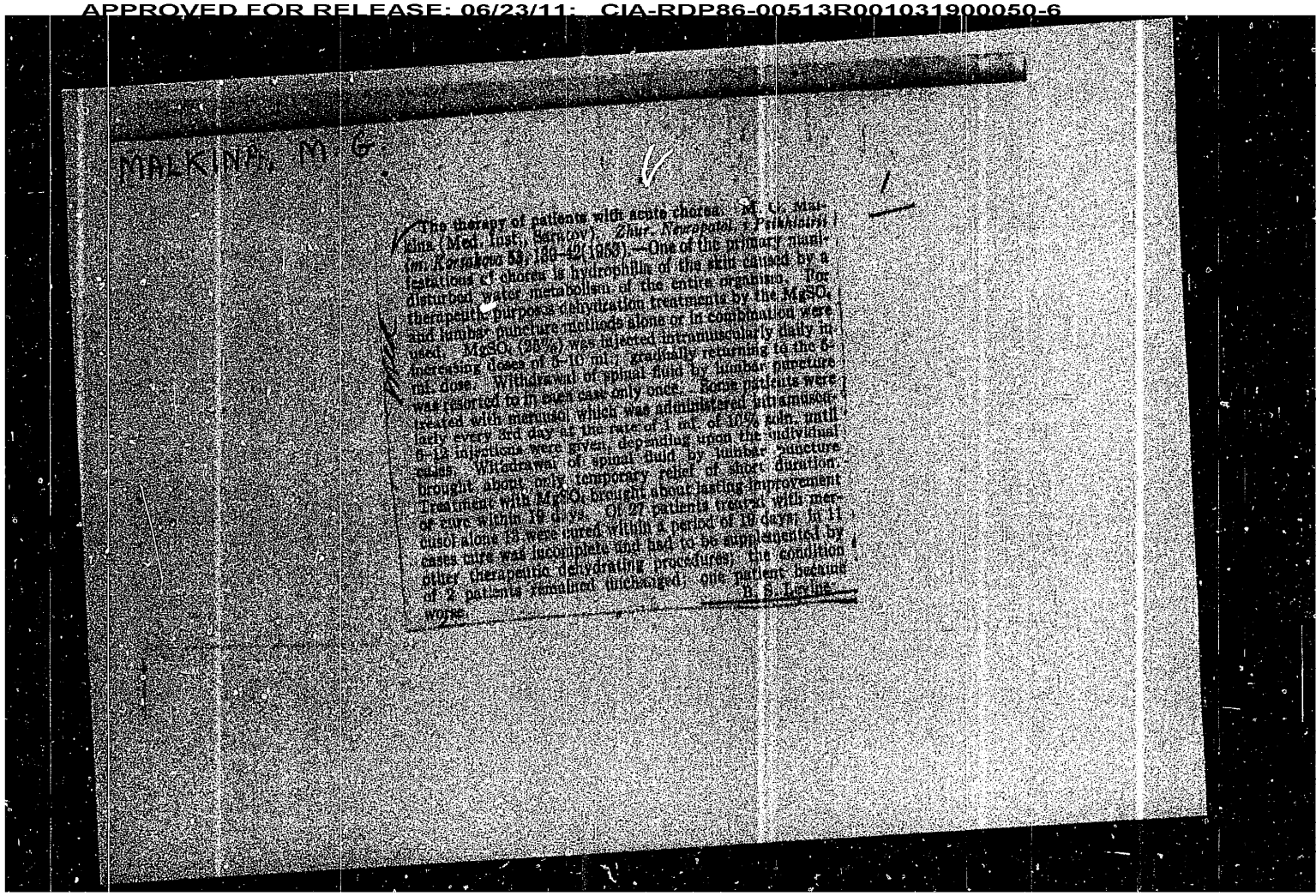
4297. MALKINA M.G. and ARCHANGELSKY A.V. Dept. of Psychiat. and Dept. of Pathol. Anat., Med. Inst., Saratov, USSR. Psychotic disturbances in cerebro-hypophyseal cachexia (Russian text)
PROBL. ENDOKR. 1956, 1(3-7)

A case of Simmonds' disease is described with a peculiar course and pronounced psycho-pathological symptoms. A youth of 20 yr. showed deficiency of the endocrine system previously to the onset of distinct symptoms of the disease. After tonsillectomy the following signs and symptoms appeared: a non-glycosuric polyuria, a progressive exhaustion and adynamia, loss of pubic and axillary hair, a persistent subnormal temperature, low blood pressure figures, a low blood sugar level and anorexia, changing subsequently to bulimia. Only 1 year after the onset of the disease psychical changes became apparent: negativism, malice to his relatives, unsteady delirious ideas of being poisoned, nonsensical hypochondriacal thoughts, fragmentary hallucinations, languor, depression, apathy, irritability. During life, a syphilitic nature of the disease was supposed - on account of the anamnestic data and of a temporary improvement following the specific therapy with biochinol and antibiotics. The clinical diagnosis was confirmed at post-mortem examination of the brain. Lesions of vessels of a syphilitic type and a diffuse gummatous infiltration were found mainly in the diencephalon and chiasma; there were none in the hypophysis. Analysing the described case, we see that Simmonds' disease can be accompanied by polymorph and temporary psychopathological changes of an asthenic-depressive syndrome type - emotional lability, irritability, negativism; it is important to observe this in the differential diagnosis from schizophrenic diseases. In connection with the localization of the lesions in the diencephalon, disturbances of its function - the non-glycosuric polyuria, bulimia, impaired thermoregulation are observed. Such overlap blurs the picture of the basic disease and leads to a wrong diagnosis.

Krimsky - Moscow (VI, 3, 8)

MALKINA, M.G.

On A.Kh.Shtrempel's letter published in "Zhurnal nevropatologii i psikhiatrii im S.S.Korsakova," no.10, 1953. Zhur.nevr.i psikh. 54 no.4:366-367 Ap '54. (MLRA 7:5)
(SHREMPEL, A.Kh.) (CHOREA)



MALKIN, M. G.

The therapy of patients with acute chorea. M. G. Malkin (Med. Inst., Saratov). *Zhur. Nevropatol. i Psikhiatrii im. Korsakova* 59, 1488–49 (1959).—One of the primary manifestations of chorea is hydrophilia of the skin caused by a disturbed water metabolism of the entire organism. For therapeutic purposes dehydration treatments by the $MgSO_4$ and lumbar puncture methods alone or in combination were used. $MgSO_4$ (25%) was injected intramuscularly daily in increasing doses of 5–10 ml., gradually returning to the 5-ml. dose. Withdrawal of spinal fluid by lumbar puncture was resorted to in each case only once. Some patients were treated with mannitol, which was administered intravenously every 3rd day at the rate of 1 ml. of 10% soln. until 6–15 injections were given, depending upon the individual cases. Withdrawal of spinal fluid by lumbar puncture brought about only temporary relief of short duration. Treatment with $MgSO_4$ brought about lasting improvement or cure within 18 days. Of 27 patients treated with mercusol alone 19 were cured within a period of 10 days; in 11 cases cure was incomplete and had to be supplemented by other therapeutic dehydrating procedures; the condition of 2 patients remained unchanged, one patient became worse.

B. S. Levine

1. MALKINA, M. G.

2. USSR (600)

4. Liver - Diseases

7. Non-icteric form of Botkin's disease. Sov. med. 1[illegible] no. 9, '52.

9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

MALKINA, M. G.

USSR/Medicine - Virus Diseases Nov 51

"Development of Cirrhosis of the Liver as a Result of Botkin's Disease," M. G. Malkina, First Therapeutic Clinic, Moscow Oblast Sci Res Clinical Inst imeni M. F. Vladimirskiy

"Sov Med" Vol XV, No 11, pp 21-25

According to clinical observations, all forms of Botkin's disease (including light forms free of jaundice) may rapidly result in cirrhosis of the liver.

204T55

MALKINA, Marianna Grigor'yevna

(merkuzal) - as new (osmoterapevticheskoye)(Osmo-therapeutical?) Means a Treatment of Epilepsy and Acute Prochee

Dissertation for a candidate of a Medical Science degree. Chair of Nerve diseases (head, Prof. K.N. Tret'yakov) Saratov Medical Institute, 1950

MALKINA, M. G.

23653.

RANENIYA POZVONOChNIKA I SPINNOGO MOZGA I IKH KHIRURGIChESKOYE. TRUDY SARAT. GOS. MED. IN-TA, T. VIII, 1949, s. 299-306.--BIBLIOGR: 6 NAZV.

SO: LETOPI' NO. 31, 1949

PA 65/49T84

USSR/Medicine - Societies Apr 49
Endocarditis

"Proceedings of the Sixteenth Scientific Conference of Moscow Oblast Doctors," M. G. Malkina, Moscow, 2 pp

"Sov Med" No 4

Conference of doctors from Moscow Oblast Pub Health Dept and Moscow Oblast Sci Res Clinical Inst, 3 - 5 Dec 48, was attended by 1,020 persons. Two problems were discussed: subacute septic endocarditis and acute forms of hepatitis. Among the speakers were N. A. Vinogradov, Dep

65/49T84

USSR/Medicine - Societies (Contd) Apr 49

Min of Pub Health, Prof N. A. Zhdanov, Kharkov, and Prof B. A. Chernogubov.

65/49T84

MALKINA, M. G.

MALKINA, M. G.

Malkina, M. G. "On the problem of local tetanus," Trudy (Sarat. gos. med. in-t), Vol. VII, 1948, p. 229-36 - Bibliog: 5 items

SO: U-3264, 10 April 1953, (Letopis 'Zhurnal 'nykh Stately, No. 3, 1949)

MALKINA, M. G.

Malkina, M. G. "Comparative study of osmotherapeutic methods in convulsive cases (mercusal, lumbar puncture, magnesia)," Trudy (Saret. gos. med. in-t), Vol. VII, 1948, p. 107-16

SO: U-3264, 10 April 1953, (Letopis 'Zhurnal 'nykh Statey, No. 3, 1949)

MALKINA-TRET'YAKOVA, [illegible]. G.

Tret'Yakov, [illegible]. [illegible]. and Malkina-Tret'Yakova, [illegible]. [illegible].—"Clinical investigation of the temperature of cerebro-spinal fluid during different affections of the nervous system," (Report on the 3rd scientific [illegible] of the Saratov Medical Institute, [illegible] 1944, Tr. (Sarat. gos. med. in-t), Vol. VII, 1948, [illegible]. 3-6

So: U-3264, 10 April 1953, (Letopis 'Zhurnal 'nykh Statey, No. 3, 1949)

MALKINA, M. G.

Malkina, M. G. "Study of the temperature of cerebro-spinal liquid during epilepsy," Trudy (Sarat. gos. med. in-t), Vol. VII, 1948, p. 7-11

SO: U-3264, 10 April 1953, (Letopis 'Zhurnal 'nykh Statey, No. 3, 1949)

FREYDLIN, L.Kh., doktor [illegible]; S[illegible], [illegible], inzh.; [illegible], O.M., inzh.; [illegible], L.L.; [illegible], [illegible], inzh.

Prepa[illegible]tion of [illegible] ([illegible]) by the dehy[illegible]tion of a mixture of pyrocatechol [illegible] eth[illegible]ol on a [illegible] [illegible]sophate cat[illegible]. [illegible]sl.-zhir. prom. 27 no. 2:29-30 '61. ([illegible] 14:2)

1. In[illegible]titut organicheskoy khimii imeni N.D.Zelinskogo AN SSSR (for Freydlin, Sharf). 2. [illegible]ovskiy zavod "Slozhnyye efiry" (for [illegible]ol'[illegible]r, [illegible], [illegible]v).

(Pyrocatechol) (Ethyl alcohol) (Phenol)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031900050-6

FREYDLIN, L. Kh.; SHARF, V.Z.; KHOL'MER, O.M.; MALKINA, L.L.

Properties of a boron phosphate catalyst in the dehydration of a pyrocatechol-methanol mixture. Kin. i kat. 2 no.2:228-234 Mr-Ap '61. (MIRA 14:6)

1. Institut organicheskoy khimii imeni N. D. Zelinskogo AN SSR i Issledovatel'skaya laboratoriya zavoda "Slozhnyye efiry".
(Boron phosphate)
(Dehydration (Chemistry))

FREDLIN, L.Kh., doktor khim.nauk; SHARF, V.Z., inzh.; KHOL'MER, O.M., inzh.; MALKINA, L.L.; LEBEDEV, I.M., inzh.

Preparation of guaiacol by the catalytic dehydration of a mixture of pyrocatechol and methanol. Masl.-zhir.prom. 26 no.10:24-27 O '60. (MIRA 13:10)

1. Institut organicheskoy khimii AN SSSR imeni N.D.Zelinskogo (for Freydlin, Sharf). 2. Moskovskiy zavod "Slozhnyye efiry" (for Khol'mer, Malkina, Lebedev).
(Guaiacol) (Pyrocatechol) (Methanol)

MALKINA, L.L.

KRASEVA, V.N., inzh.; BAG, A.A., kand. tekhn. nauk; MALKINA, L.L.; KHOL'MER, O.M., inzh.

Catalytic dehydrogenation of alcohols. Masl.-zhir. prom. 24 no.12:23-25 '58. (MIRA 11:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskikh i natural'nykh dushistykh veshchestv (for Kraseva, Bag). 2. Moskovskiy zavod "Slozhnyye efiry" (for Malkina, Khol'mer).
(Perfumes, Synthetic) (Alcohols) (Dehydrogenation)

L 9799-66
ACC NR: AT6001352

0

SUB CODE: 11, 07/ SUBM DATE: 31Aug65/ ORIG REF: 000/ OTH REF: 002

ATD PRESS: 4164

Card 3/3

decomposition of ethanol with the formation of a coke-like deposit on the contact surface. Thermal decomposition of ethanol at a flow velocity less than 30 meters/sec starts at wall temperatures of 623-673 K and is practically independent of the liquid temperature. At higher velocities, decomposition of the alcohol is not observed even at a wall temperature of 973 K. At a pressure of 800 x 9.8 x 10^4 newtons/meter^2, thermal decomposition was not observed. In the experiments at 300 x 9.8 x 10^4 newtons/meter^2, pseudo-boiling was observed and led to an increase in the heat transfer rate. Pseudo-boiling was not observed at the pressure of 800 x 9.8 x 10^4 newtons/meter^2. In the fully developed turbulent flow of alcohol in the absence of coke formation and pseudo-boiling at a pressure equal to or greater than 300 x 9.8 x 10^4 newtons/meter^2, heat transfer to ethanol can be calculated by the laws of convective heat transfer. The data obtained satisfy the equation

$$Nu_{l_x} = 0{,}021\, Re_{l_x}^{0.8} Pr_{lg}^{0.43} \left(\frac{Pr_{lg}}{Pr_w}\right)^{0.25} \left(\frac{l_x}{d}\right)^{0.2},$$

where subscripts lg and w refer to the liquid and wall, respectively, and l_x is the length of the tube from the start of heating to the calculating section. Analysis of the experimental results shows that there exists an optimum pressure of the applied pressure at which pseudo-boiling is most developed. Further increase in pressure leads to a worsening of conditions for the formation of a new phase and the generation of pseudo-boiling.

[06]

L 9799-66 EWT(1)/EWT(m)/ETC/EPF(n)-2/EWG(m)/EWP(j)/T RPL WW/JW/WE/GS/RM

ACC NR: AT6001352 SOURCE CODE: UR/0000/65/000/000/0059/0062

AUTHOR: Alad'yev, I. T.; Povarnin, P. I.; Malkina, L. I.; Merkel', Ye. Yu.

ORG: Power Institute im. G. M. Krzhizhanovskiy (Energeticheskiy institut)

TITLE: Investigation of the cooling properties of ethanol at pressures up to 800 x 9.8 x 10^4 newtons/meter^2

SOURCE: Teplo- i massoperenos. t. 1: Konvektivnyy teploobmen v odnorodnoy srede (Heat and mass transfer. v. 1: Convective heat exchange in an homogeneous medium). Minsk, Nauka i tekhnika, 1965, 59-62

TOPIC TAGS: ethanol, cooling, heat transfer

ABSTRACT: The experiments were carried out in a flow of alcohol in 1Kh18N9T stainless-steel seamless tubes with inside diameters of 0.0006 to 0.0021 meters and length to diameter ratios from 20 to 175. Tube wall temperature reached 973K, the temperature of the liquid varied from 288 to 623K, and the flow velocity of the alcohol was 5 to 60 meters/sec. The maximum specific heat fluxes reached 35 x 10^6 x 1.163 watts/meter^2. The experiments showed that heat transfer at pressures of 300 x 9.8 x 10^4 newtons/meter^2 is accompanied by thermal

Card 1/3

ALADYEV, I. T.; POVARNIN, K. P.; MALKINA, L. I.; MERKEL, E. Yu.

"Investigation of the cooling properties of ethyl alcohol at pressures to 800 ATM."

report submitted for 2nd All-Union Conf on Heat & Mass Transfer, Minsk, 4-12 May 1964.

G. M. Krzhizhanovskiy Power Inst.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031900050-6

as being $\varphi = 0.022\ Gr \cdot Re^{-09}$; w[m/sec], γ[kg/m^3]. Oxygen gasifiers constructed according to these notions safely confirmed the results obtained with the research work. There are 3 figures and 4 references, 3 of which are Soviet.

24 (8)
AUTHOR: Malkina, L. I., Engineer

SOV/67-59-4-5/19

TITLE: Heat Exchange in Oxygen Gasifiers for Airplanes

PERIODICAL: Kislorod, 1959, Nr 4, pp 27-29 (USSR)

ABSTRACT: The frost layer forming on the outer tube walls of tubular evaporation systems for low-boiling liquids strongly influences the heat exchange between the warmer ambient and the liquid evaporating in the tube. The dependence of the thermal conductivity coefficient on the volumetric weight of the frost layer had already earlier been investigated by Schropp; the tube wall temperatures, however, were then merely of -10 to -20°C. Other authors (Refs 2, 3) investigated the influence of the frost layer on the heat transfer coefficient k, but only down to tube temperatures of -20°C. The author of the present paper investigated this influence as exerted on the heat transfer coefficient, based on the evaporation of liquid oxygen in spiral tube vaporizers for airplanes, at considerably lower temperatures (at -150°C). When interpreting the experimental results he obtained a general empirical relation for the determination of k, in which the frost layer is considered. It holds: $k = \varphi \gamma w c_p$; φ was experimentally determined

Card 1/2

MALKIN, L. I., Cand of Tech Sci -- (diss) "Investigation of the Operation of Aircraft Oxygen Generators," Moscow, 1959, 14 pp (Moscow Institute of Chemical Machine-Building) (KL, 8-60, 116)

The Heat Exchange Process in an Oxygen Gasifier for Aircraft

67-6-3/23

ula by M.A. Mikheyev: $Nu_m = 0,54(Gr \cdot Pr)_m^{\frac{1}{4}}$, which is, however, said not to correspond to real conditions because heat emission is different at different points of the spiral tube of the gasifier. After mathematical calculations, which in this case comprise 11 formulae, the conclusion is drawn that this manner of determining the course taken by temperature in the "coat of snow" is but of little use. The attempt to solve this problem further according to the formula by Laplace-Carlson leads to the conclusion that only in this way a mathematical solution can be found, which, however, cannot be in any way connected with the physical side of this problem. It is said in conclusion that

$$Nu_m = (Gr.Pr)^{\frac{1}{8}}$$

represents a suitable approximated formula. There are 3 figures, 1 table, and 3 Slavic references.

AVAILABLE: Library of Congress

Card 2/2

MALKINA, L. I.

67-6-3/23

AUTHOR: Malkina, L.I., Engineer

TITLE: The Heat Exchange Process in an Oxygen Gasifier for Aircraft (Teploobmen v samoletnom kislorodnom gazifikatore)

PERIODICAL: Kislorod, 1957, Nr 6, pp. 18-22 (USSR)
Received: April 7, 1958

ABSTRACT: In the introduction to this paper the necessity of using oxygen in passenger planes and its suitable storage in such aircraft is discussed. Preference is given to liquid oxygen. For this purpose gasifiers of the type "КПЖ-30" are used in the USSR. The heating necessary for gasification of the compressed oxygen is carried out at the expense of the temperature in the interior of the aircraft. It is pointed out that problems of the suitable construction of such gasifiers as well as their application in practice are still in the experimental stage. A particular difficulty for the computation of constructions in such apparatus, as also their application consists in the forming of the so-called "coat of snow" on the spiral tube of the gasifier, which is caused by the great difference in temperature between the liquid oxygen in the tube and the outside air. In this paper the attempt is made to investigate this phenomenon and to develop suitable theories. Calculations are based upon the form-

Card 1/2

MALKINA, L.I.

AUTHOR: Malkina, L., Engineer

85-58-2-19/36

TITLE: Use of Liquid Oxygen in High-Altitude Flights (Ispol'zovaniye zhidkogo kisloroda pri vysotnykh poletakh)

PERIODICAL: Kryl'ya rodiny, 1953, Nr 2, p 17 (USSR)

ABSTRACT: The author discusses the use of liquid oxygen during high altitude flying, referring to the KPZh-1 oxygen gasifier produced by the Ukrainskiy fiziko-tekhnicheskiy institut (Ukrainian Physico-Technical Institute) in 1935 as the first of its kind. Subsequent improvements were incorporated in the KPZh-10 used by M. M. Gromov in his flight from Moscow to the USA, via the North Pole. The KPZh-30 developed in the last few years under the supervision of K. S. Butkevich is described, and future problems in this field are briefly mentioned, including those involved in interplanetary flight. There is one drawing of the KPZh-30.

AVAILABLE: Library of Congress

Card 1/1

TUMANOV, A.A.; MALKINA, L.A.

Enzymatic catalytic reactions for analytical purpose.
Trudy po khim.i khim.tekh. no.1:118-123 '64.
(MIRA 18:12)

1. Submitted July 10, 1963.

SOV/75-14-3-19/29

Determination of Micro Amounts of Arsenic by Using a Solution of Bivalent Chromium

ASSOCIATION: Luganskiy gosudarstvennyy meditsinskiy institut
(Lugansk State Medical Institute)

SUBMITTED: June 26, 1958

Card 2/2

5(2)

SOV/75-14-3-19/29

AUTHORS: Shat'ko, P. P., Vasina, N. T., Podol'skaya, V. I., Malkina, L. A., Ponomareva, T. F.

TITLE: Determination of Micro Amounts of Arsenic by Using a Solution of Bivalent Chromium (Opredeleniye mikrokolichestv mysh'yaka s primeneniyem rastvora dvukhvalentnogo khroma)

PERIODICAL: Zhurnal analiticheskoy khimii, 1959, Vol 14, Nr 3, pp 358-359 (USSR)

ABSTRACT: The reduction of the ions of the pentavalent arsenic is carried out on freshly precipitated metallic copper as collector. The copper is precipitated by means of chromium salts and dissolved again with iron ammonium alum, the residue consisting of metallic arsenic is determined iodometrically in the usual way. The method permits the determination of 0.02 mg As in 100-200 ml. It was checked on standard samples of bronze and brass. In the analysis of copper alloys a preceding addition of $CuSO_4$ is not necessary. Tin, lead and other components of bronze and brass do not disturb. There are 1 table and 11 Soviet references.

Card 1/2

MALKINA, Kh.E.; VOSTROKNUTOV, Ye.G.; KAMENSKIY, B.Z.

Conference on tire recapping. Kauch. i rez. 20 no.10:54-57 O '61.
(MIRA 14:12)

(Tires, Rubber)

MALKINA, Kh.E.; KRASOTINA, A.N.; Prinimali uchastiye: ZUBKOVA, I.A.; RYZHKOVA, K.A.; SALOMASOVA, A.M.

Compounding formula, manufacture, and uses of carbon black-free lubricants for vulcanization molds. Kauch.i rez. 20 no.7:30-33 Jl '61. (MIRA 14:6)

1. Nauchno-issledovatel'skiy institut shinnoy promyshlennosti.
(Vulcanization--Equipment and supplies)
(Lubrication and lubricants)

MALKINA, Kh.E.

Vulcanization shops of tire factories in operation. Kauch.i rez. 20 no.3:44-46 Mr '61. (MIRA 14:3)

1. Nauchno-issledovatel'skiy institut shinnoy promyshlennosti.
(Tires, Rubber) (Vulcanization)

S/081/62/000/008/094/057
B156/B101

Drying and vulcanization of ...

provided with an electric heater; the outer surface of the article is subjected to infra-red heating. The drying temperature is kept lower than the temperature at which sponge formation occurs. The total drying-vulcanizing time is 145 min, energy consumption is 0.24 kw-hr for heating of the core and 0.3 kw-hr for the infra-red heating. [Abstracter's note: Complete translation.]

Card 2/2

S/081/62/000/008/054/057
B158/B101

AUTHORS: Malkina, Kh. E., Pukhov, A. P.

TITLE: Drying and vulcanization of rubber latex articles by an industrial-frequency current and contact radiation

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 8, 1962, 601, abstract 82354 (Vestn. tekhn. i ekon. inform. N-i. in-t tekhn.-ekon. issled. Gos. kom-ta Sov. Min. SSSR po khimii, no. 4, 1961, 26-29)

TEXT: Gelatinization-vulcanization of latex sponge by an industrial-frequency current and the contact-radiation method of drying-vulcanizing monolithic latex articles are described. In both cases, an industrial frequency current of 50 cps was used. Vulcanization of articles 300 mm thick at a current density of 0.02 a/cm^2, took 20-28 min, which is 4-5 times shorter than with heating by heat transfer. Energy consumption in vulcanization is 0.3-0.45 kw-hr per kg of sponge. A second method was developed for latex articles produced by gelatinization. A metal core, on which is dried and vulcanized a gel of complex configuration, is

Card 1/2

The Ultrasonic Defectoscopy of Tire Casings

cases meant the detection of "false" defects. 4) The reliability of the apparatus in operation is high. During its functioning period (one year) no damages in the electrical part of the apparatus were observed. 5) The apparatus described can be installed in tire plants as a laboratory and production apparatus for selective, total or combined flaw detection, as well as in automobile and tire-repair plants. 6) The drawback of the defectoscope is the absence of a recorder of the defects shown. The duration of the testing of one casing will be 4 min when an automatic recorder and a perfected tub are introduced into the design of the defectoscope. There are 3 tables, 4 circuit diagrams, 2 diagrams, 1 graph, 1 photograph and 3 English references.

ASSOCIATION: Nauchno-issledovatel'skiy institut shinnoy promyshlennosti (Scientific Research Institute of the Tire Industry)

The Ultrasonic Defectoscopy of Tire Casings

contained in the metal body is made of barium titanate. The thickness of the barium titanate plate is calculated from the formula

$$t = \frac{2200}{\varphi} = \frac{2200}{50} = 44,$$

so that it can function at a frequency of 50 and 150 Mc. In the formula t is the thickness of the plate in mm, φ - the resonance frequency in Mc. The casings being tested must be clean. Otherwise the defectoscope may give false readings. Water is used as wetting liquid with additions of 10 - 15% ethyl alcohol to ensure more uniform wetting of the casing. The authors tested casings of various sizes, starting at 5.60 - 15 to 12.00 - 20. The number of correct readings represented 93% of the total tested. There were different defects present, such as lamination, porosity, air bubbles, foreign bodies, destruction of the casing. The results of the tests conducted with the defectoscope are listed in Table 3. As a result of the experiments and tests carried out by the authors, several conclusions were drawn: 1) The defectoscope operating with 50 kc can detect defects in casings of small dimensions comprising a thin-walled body (5.60 - 15), as well as in massive casings with thick-walled bodies (12.00 - 20). 2) The size of the smallest defects detected with the apparatus on an equivalent surface was 7 - 8 mm in diameter, which shows that the apparatus has a high sensitivity. False data in most

S/138/60/000/007/005/010
A051/A029

AUTHORS: Malkina, Kh.E.; Pukhov, A.P.; Ionov, V.A.

TITLE: The Ultrasonic Defectoscopy of Tire Casings

PERIODICAL: Kauchuk i Rezina, 1960, No. 7, pp. 12 - 20

TEXT: In most Soviet plants the quality check of tire casings has been conducted until recently by external examinations and knocking. This method was satisfactory due to its subjective nature. The ultrasonic defectoscopy method is recommended. Figure 1 represents the operation principle of an ultrasound apparatus. The NIIShP of the Soviet Union has designed an apparatus which is described in great detail. It has 6 channels plus an extra receiver and generator to ensure continuous operation in cases of a channel break-down. Figure 2 is an external view of the apparatus. The circuit diagram (Fig. 3) of the apparatus contains a block of feeders, a generator, receivers and transmitters. The feeding block has its own regulators, located on the front panel of the casing. The circuit diagram of the feeding block is shown in Figure 4, and that of the generator in Figure 5. The circuit diagram of the receiver is given in Figure 6. A diagrammatic cross-section of the transmitter is seen in Figure 7. The emitter

Card 1/3

PHASE I BOOK EXPLOITATION SOV/5106

Malkina, Khristina Emil'yevna

Obshchiye osnovy tekhnologii rezinovogo proizvodstva (General Technological Principles of the Rubber Industry) Moscow, Goskhimizdat, 1960. 302 p. Errata slip inserted. 15,000 copies printed.

Ed.: S.I. Khodosh; Tech. Ed.: Ye.G. Shpak.

PURPOSE: This textbook is intended for workers in the tire and rubber industry, taking industrial engineering courses. It may also be used by students in tekhnikums.

COVERAGE: The book deals with the general principles of rubber manufacturing technology. It includes data on basic and auxiliary raw materials, including rubber and substitutes, reclaimed rubber, carbon black, textile materials, and ingredients for the manufacture of rubber. Principles for preliminary processing of these materials in preparatory plants at rubber factories are described along with the equipment used in the manufacture of rubber articles. He

Card 1/9

SOV/138-59-4-6/26

A Method of Gelling and Vulcanizing Foamed Articles from Latex

There are 4 figures, 4 tables, and 3 English references, which include British patents 677482 (1950) and 654238 (1946).

ASSOCIATION: Nauchno-issledovatel'skiy institut rezinovykh i lateksnykh izdeliy i Nauchno-issledovatel'skiy institut shinnoy promyshlennosti (The Scientific-Research Institute for Rubber and Latex Articles and The Scientific-Research Institute of the Tyre Industry)

Card 4/4

A Method of Gelling and Vulcanizing Foamed Articles from Latex

the closed mould for a further 10 minutes and cooled back to 90°C, at which temperature the foamed specimen could be removed from the mould without change of its moulded dimensions. The specific gravity, modulus, permanent deformation on compression, and ageing coefficients of specimens, where heating current was applied for 8, 10 and 12 minutes, are compared in Table 4. Power consumption is estimated at 0.3 to 0.45 kWh per kg of foam (or sponge latex). In order to produce articles such as car seat cushions with cavities in the foam, it is necessary to dispose the electrodes in the projections forming these cavities in strips so that the area of the top and bottom electrodes are equal. Exploratory trials were made on cushions 350 x 260 x 200 mm dimension, loaded at 6 V/cm and with an initial 50 c/s current of 0.014 A/cm^2. Temperature increased to 130°C after 15 minutes power application, and was allowed to decrease to 95°C after switching off before the mould was opened (30 minutes cooling time). It is suggested that similar methods and cycles could form the basis of a continuous process for gelling and vulcanizing foamed latex articles.

A Method of Gelling and Vulcanizing Foamed Articles from Latex

is prolonged indefinitely. The samples first tested were 100 x 100 x 35 mm in dimensions. The resistivity of various Revertex mixes, and of the foam blown from them to 3 times original liquid volume, are given in Table 2. Figure 1 shows change in resistivity with temperature at applied voltages of 5 and 8 volts. Figure 2 shows the current/voltage relationship for a foam extended by a factor of 3.5, and variation of resistance with expansion of the foam is tabulated in Table 3. The resistance of the later mixes and the foams follows Ohm's law, and the resistance increases considerably on foaming. The curve of temperature versus time for electrified intensities of 12.5, 11.0 and 6.2 V/cm are shown in the curves of Figure 3. Experiments were then carried out on specimens 260 x 350 x 40 mm at 50 V (12.5 V/cm) and 25 A initial current on the electrodes. Variation of temperature and current with time is shown in Figure 4. The current was applied for 10 minutes, after which time the temperature reached 130°C. The specimen was left in

SOV/138-59-4-6/26

AUTHORS: Korotkova, A.A., Fomina, L.S., Malkina, Kh. E., Pukhov, A.P.

TITLE: A Method of Gelling and Vulcanizing Foamed Articles from Latex (Metod zhelatinirovaniya-vulkanizatsii gubchatykh izdeliy iz lateksa)

PERIODICAL: Kauchuk i Rezina, 1959, Nr 4, pp 19-23 (USSR)

ABSTRACT: Latex foams can be gelled and vulcanized by radio-frequency current in the 10-20 mc/s range, by high-frequency current from machine generators in the 500 to 10,000 c/s range, or at power frequency of 50 c/s. Experiments were made using moulds formed of reinforced rubber with electrode in the base and in the lid of the mould. Standard "Revertex" mixes containing 50% dibutylphthalate plasticizer were used for these tests. Difficulties through corrosion were encountered when working at 50 c/s frequency with the original aluminium electrodes. Tests were made with various electrode materials listed in Table 1 and it was found that stainless steel, mark EYaIT, showed only 0.002% weight loss on a four-hour test at 50 c/s and negligible corrosion with up to 10 or 12 repeat tests of this duration. At higher frequencies the electrode life with this material

The Application of HF Heating in Rubber Manufacturing Processes

There is 1 Soviet reference.

ASSOCIATION: NII shinnoy promyshlennosti MKhP (Scientific Research Institute of the Tire Industry of MKhP)

Card 3/3